AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at line 18 of page 5 as follows:

As shown in Fig. 3(b), when the composition ratio x is 0.1 or below, the Curie temperature becomes 40°C or below, which is equal to or close to room temperature. When heated to or above the Curie temperature, the PMN-PT solid solution single crystal changes to a cubic ~~crystalline~~ phase in which it blocks optical transmission. Thus, when the Curie temperature is equal to or close to room temperature, even if the PMN-PT solid solution single crystal is caused by the application of an electric field above the threshold to make a transition to the state which has a low permittivity and allows optical transmission, it returns to the first state which blocks optical transmission, at a temperature equal to or close to room temperature. This hampers the memory effect. Thus, in order for the memory effect to be produced properly, it is preferable that the composition ratio x is larger than 0.1. In other words, in order for the memory effect to be produced properly, preferably the composition ratio x is set such that the Curie temperature will be higher than 40°C.